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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,051	03/04/2002	Stephen M. Douglass	X-923 US	7802
24309	7590	01/12/2004	EXAMINER	
XILINX, INC ATTN: LEGAL DEPARTMENT 2100 LOGIC DR SAN JOSE, CA 95124			WHITMORE, STACY	
			ART UNIT	PAPER NUMBER
			2812	

DATE MAILED: 01/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/092,051

Applicant(s)

DOUGLASS, STEPHEN M.

Examiner

Stacy A Whitmore

Art Unit

2812

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-8, 11-15, 18, 19, 21, 23, 26-28 and 30 is/are rejected.
- 7) ☒ Claim(s) 2,3,9,10,16,17,20,22,24,25,29,31 and 32 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

FINAL ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1, 4-8, 11-15, 18-19, 21, 23, 26-28, and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Squires (US Patent 6,510,548).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

3. As for claims 1, 8, 15, and 23, Squires disclosed, the invention as claimed, including a method for designing an integrated circuit, the method comprising:

determining/identifying logic requirements - I/O requirements for an intended set of applications for the integrated circuit [col. 1, lines 13-15 where the PLD is user programmed which would include determining logic requirements for an intended set of applications, the I/O requirements would also be identified because the logic could not operate without the proper I/O requirements being identified];

determining at least one common logic function for the intended set of applications for the integrated circuit [col. 1, and especially col. 1, lines 13-15, and 49-55, where the PLD is user programmed which would include determining at least one common logic function for the intended set of logic requirements for an intended set of applications];

identifying an approximate number of configurable logic blocks and at least one fixed logic (I/O) circuit that, when combined to operate cooperatively, meet a substantial portion of the logic requirements for the intended set of applications for the integrated circuit [col. 1, especially lines 53-56] (claim 23 - selecting a fixed logic circuit operable

to meet the common logic function – fig. 5, element 501 is selected, and the I/O circuitry is also identified);

designing the integrated circuit to include the approximate number of configurable logic blocks formed as a fabric and arranged to (at least partially) surround an opening in the fabric [col. 1, and fig. 5, element 501 is surrounded by CLB's];

designing the integrated circuit to include the at least one fixed logic circuit in the opening in the fabric [col. 1, "the core is included in the opening in the fabric, see fig. 5, element 501, which is provided in an opening in the fabric of CLB's]; and

designing the integrated circuit to include interconnecting logic that interfaces the at least one fixed logic circuit to the fabric [col. 1, and fig. 5, elements 501a – 501c].

(claim 23) designing the IC to include the approximate number of CLBs, the fixed logic circuit, and the fixed logic I/O circuit [col. 1, and fig. 5].

4. As for claims 4-5, 11-12, 19, and 27, Squires disclosed wherein the at least one fixed logic circuit is selected from the group consisting of digital signal processors, microprocessors, physical layer interfaces, link layer interfaces, network layer interfaces, audio processors, video graphics processors, and applications specific integrated circuits [col. 1, especially dsp]; and

wherein the intended applications include at least one of communications applications, system-on-a-chip applications, image processing applications, parallel processing applications, networking applications, serial processing applications, and prototyping applications [col. 1, dsp functions include communications applications, image processing, parallel and serial applications].

5. As for claims 6-7, 13-14, 21, 28 and 30, Squires disclosed wherein the logic requirements are characterized by parameters including at least one of data processing requirements, data storage requirements, data throughput requirements, instruction set type, and instruction set contents [col. 1, lines 13-15 where the PLD is user programmed which would include data processing requirements, data storage

requirements, and data throughput requirements because the designed logic could not operate without the proper data requirements being characterized]; and wherein the integrated circuit occupies a die area [col. 1]; and the fixed logic circuit occupies less than a predetermined percentage of the die area [fig. 5, element 501, reads on the less than a predetermined area because the area held for the logic is predetermined].

6. As for claims 18 and 26, Squires disclosed at least one fixed logic input/output circuit is selected from the group consisting of high speed serial input/output circuits and high speed parallel input/output circuits [col. 2, lines 23-27, the term high speed is a relative term which is not limited in scope to a certain rate and therefore any serial or parallel I/O reads on the limitation].

7. Claims 2-3, 9-10, 16-17, 20, 22, 24-25, 29, and 31-32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter: Claim rejections of claims 2-3, 9-10, 16-17, 20, 22, 24-25, 29, and 31-32 is no longer maintained because the 103(a) rejection of record is rendered moot by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person in accordance with MPEP § 706.02(I)(1) and § 706.02(I)(2).

9. Applicant's arguments filed with respect to claims 1, 4-8, 11-15, 18-19, 21, 23, 26-28, and 30 on October 20, 2003, have been fully considered but they are not persuasive.

On pages 10-11 of the remarks, applicant argues in substance:

A: Squires does not teach incorporating a hard implementation in an FPGA.

Examiner respectfully disagrees for the following reasons:

As to A: Squires does disclose incorporating a hard implementation in an FPGA [col. 1, lines 28-45, and 63-67; col. 2, lines 4-7; col. 3, lines 43-54: Squires shows that vendor cores are provided as in a hard implementation and also as fixed plug-in cores such as memories, storage elements and math functions that are pre-designed cores].

10. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stacy A Whitmore whose telephone number is (571) 272-1685. The examiner can normally be reached on Monday-Thursday, alternate Friday 6:30am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Niebling can be reached on (571) 272-1679. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3719.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Stacy A Whitmore

Primary Examiner

Art Unit 2812

SAW

A handwritten signature in black ink, appearing to read "Stacy A. Whitmore". The signature is stylized with a large, looped initial "S" and a clear "A." followed by "Whitmore".